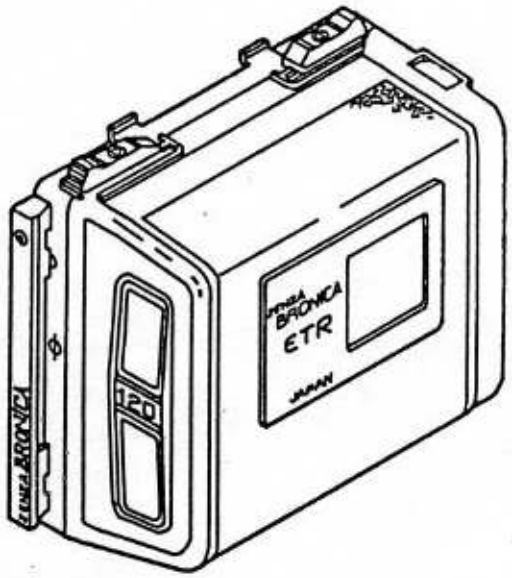
ETRSi

FILM BACK-Ei

REPAIR MANUAL

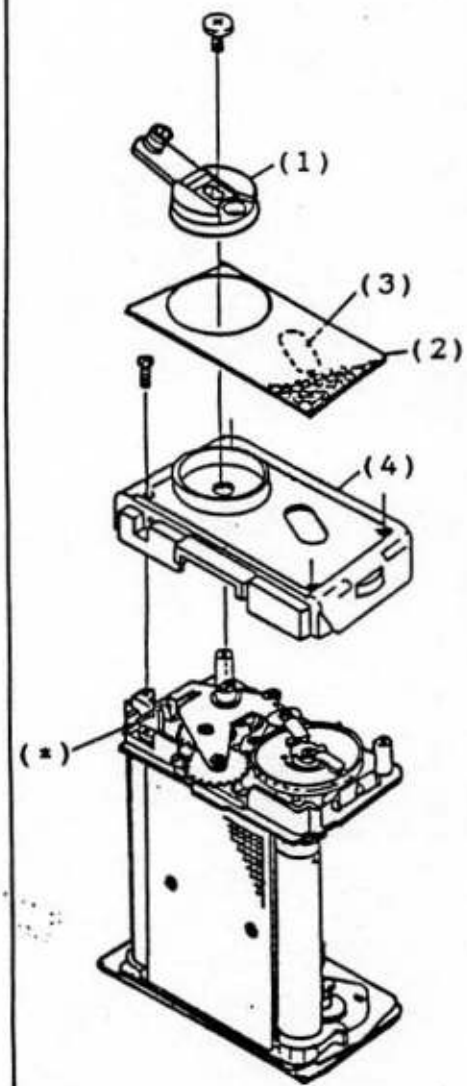


BRONICA CO.,LTD.

Back Repair

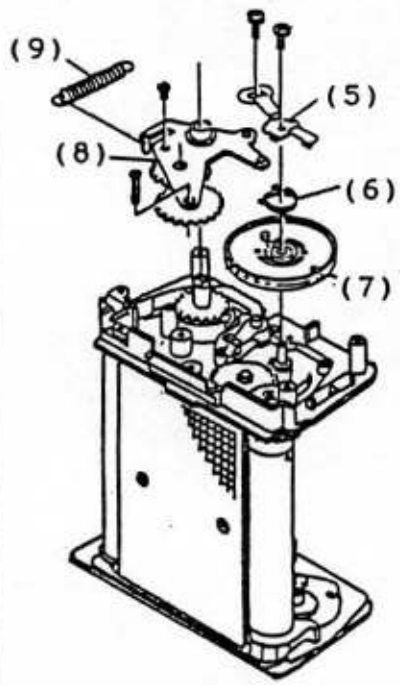
M. right side cover removal	P- 1
Counter and winding base plate removal	P- 2
Lever and counter gear (B), (C) removal	P- 3
Right light tight frame and counter roller (A), (B) and back winding gear (C) removal	P- 4
M. left side cover and spool holder lock removal	P- 5
Winding will not stop or release after winding stop (overlapping frames)	P- 7
The film will not advance to the 15th frame	P- 8
The rear cover will not close The rear cover will not open	P- 9
Light leaks	P-10

(FILM BACK-Ei)

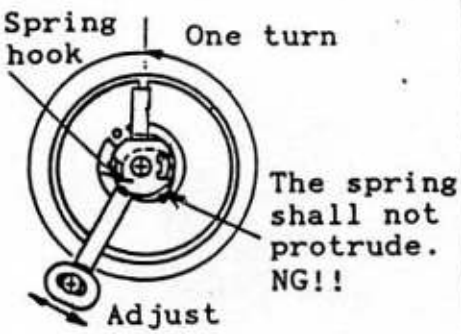
Sketch	Explanation
[Figure 1] 	M. right side cover removal 1. Remove the winding crank (1). Screw: special panhead M1.7x3.5-B (95023562) (left-hand threads) x 1 screw 2. Peel off the leatherette (2) (with M. right side cover plate (3)) and remove the right side cover (4). Screws: self-tapping panhead type 1 M1.7x3.5-B (95873357) x 4 screws --- [Figure 1] * Reassembly notes o Check the counter and F window for dirt before reassembling. o When positioning the M. right side cover, be careful concerning the end of the F. release lever indicated with an asterisk (*).

Sketch	Explanation

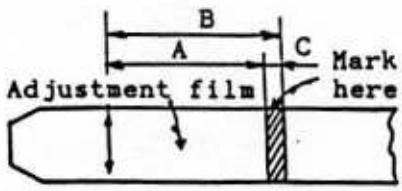
[Figure 2]



[Figure 3]



[Figure 4]



Start mark S position mark

For 120 A216mm B232mm
For 220 A226mm B242mm

o Ok if within range C.

Counter and winding base plate removal

1. Remove the counter stopper (5).

   Screws: special panhead M1.7x2.5-B (0116230) x 2 screws

2. Remove counter gear SP (6) and the 120 or 220 dividing plate set (7).

3. Remove the spring (9) and then remove the winding base plate (8).

   Screws: self-tapping panhead type 3 M2.0x8.0-B (95885807) x 2 screws
   self-tapping type 1 M2.0x 4.0-B (95875407) x 1 screw
   --- [Figure 2]

× Reassembly notes

o Reassembling the counter stopper (5)

a. Hook the spring (6) at (5) and lightly tighten the two special panhead screws.

b. Rotate (7) one turn counterclockwise and lightly tighten the special panhead screw. (Be careful when installing the spring; otherwise, the counter will not return.)
   --- [Figure 3]

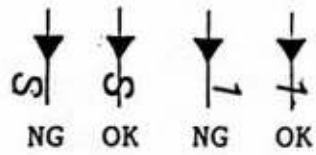
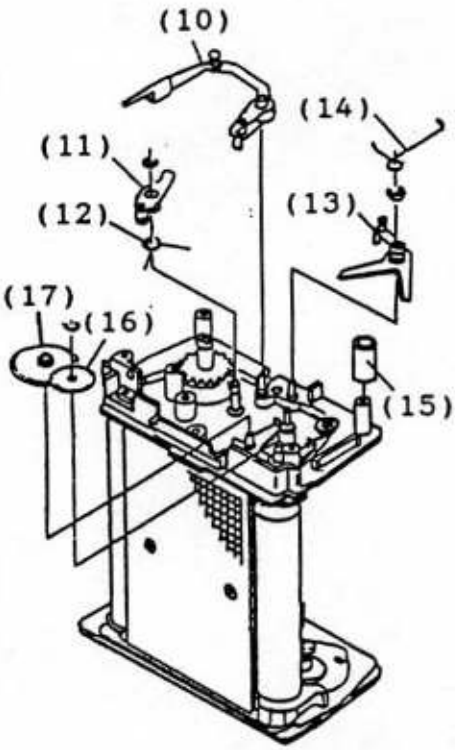
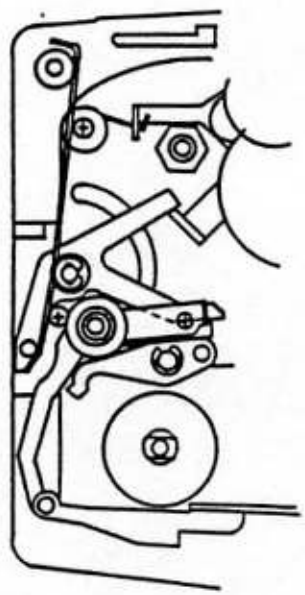
c. Load the back with film, mount the back on the camera and adjust the start position with (5).

d. Tighten the special panhead screw and lock with Plio-Bond.

Start position adjustment

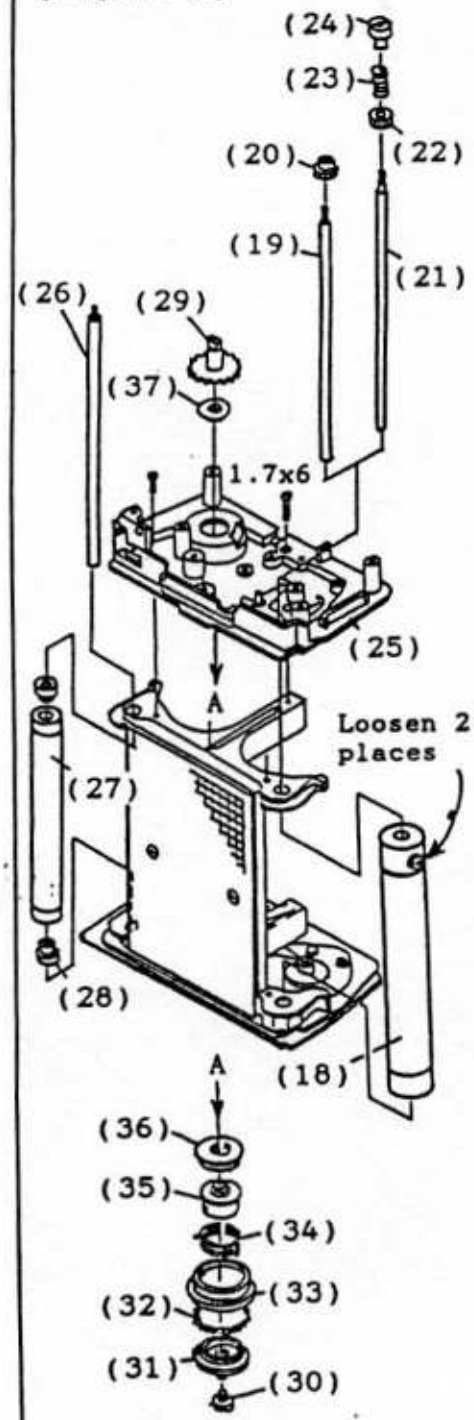
1) Load the back with film and mount it on a camera with no lens.

2) Advance the film to the first frame.

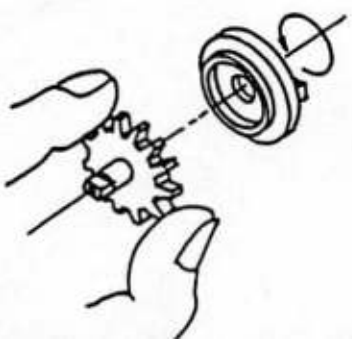
Sketch	Explanation
[Figure 5] 	3) Align the counter mark ▼ with the center of the numeral "1" and lock with Plio-Bond. 4) Press the release button and observe the film S mark from the front of the body. [Figure 4] (When the mark is not in the correct position, adjust by shifting the counter slot.) [Figure 3] 5) The character "S" shall be at the counter mark ▼ when the rear cover is opened and the counter resets. Also check if teh index mark is aligned from frame 1 to 15. [Figure 5]
[Figure 6] 	<u>Lever and counter gear (B), (C) removal</u> 1. Remove the F. release lever (10). 2. Remove the winding stopper claw (11). E-ring: E-20 (95501154) Remove the winding stopper claw spring (12). 3. Remove the counter release lever (13). E-ring: E-17 (95501744) Remove the counter release lever SP (14). Remove the collar (15). 4. Remove counter gears (B) (16) and (C) (17). E-ring: E-10 (95502124) --- [Figure 6]
[Figure 7] 	* Reassembly notes o When reassembling by reversing the above procedure, be careful concerning the lever positions. --- [Figure 7]

Sketch	Explanation

[Figure 8]



[Figure 9]



Right light tight frame and counter roller (A), (B) and back winding gear (C) removal

1. Loosen the counter roller A (18) screws. two panhead type 1 M1.7x3.5-B (95813357)

   For 120 film: when the counter roller A axle (19) is removed, the counter gear F (20) (left-hand threads) can be removed.

   For 220 film: when the counter roller axle (21) is removed, the SP retainer nut (24) (left-hand threads), counter roller SP (23), counter gear A (22) and counter roller A (18) can be removed.

2. When the right light tight frame (25) is removed, the following parts can be removed:

   o Screws: self-tapping panhead type 1 M1.7x4.0-B (95873407) x 3 screws
   self-tapping panhead type 1 M1.7x6.0-B (95873607) x 1 screw

   o Counter roller B axle (26)

   o Counter roller B (27)

   o Collar (28) x 2

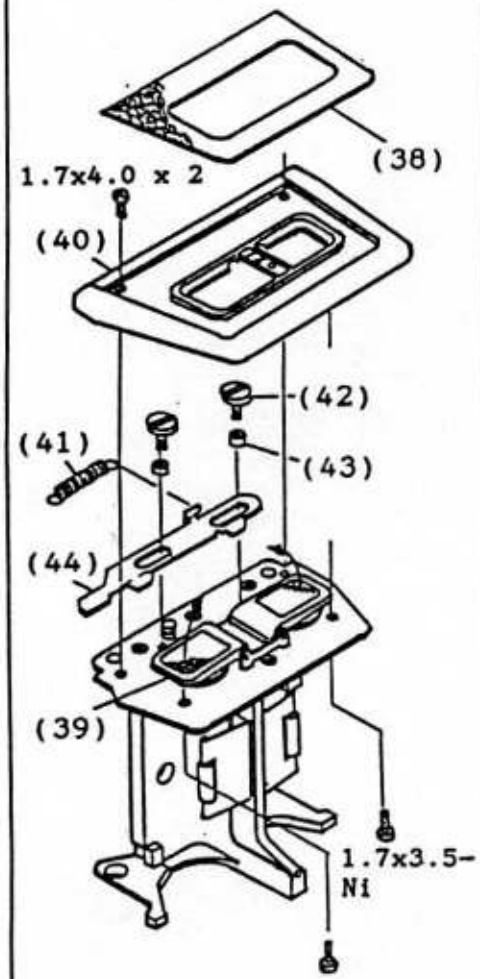
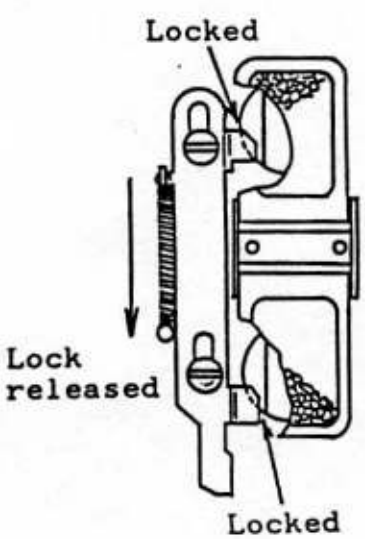
3. Remove the back winding gear (C) (29) (left-hand threads).
   Remove the screw in the spool shaft upper (30) (left-hand threads) and remove the spool claw (31) and 24 Sø 1.6mm diameter steel balls (32).
   Remove the winding spool axle holder (33), spring (34), spool clutch axle (35), winding stopper gear (36) and spool claw holder (37).

--- [Figure 8]

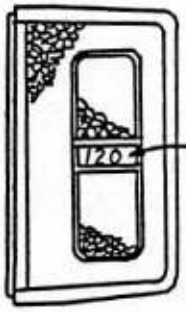
* Reassembly notes

o Reassembly only after making sure that the roller axle is not warped.

o There shall be no loose screws.

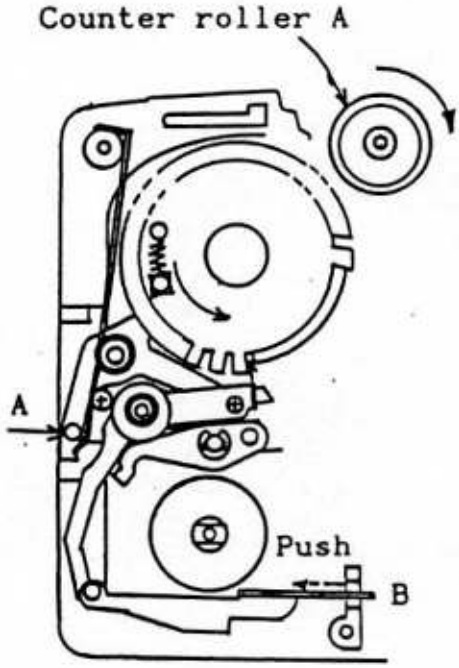
Sketch	Explanation
[Figure 10] 	o After the back winding gear (C) (29) is reinstalled, the spool claw (31) shall only rotate clockwise when pushed with the fingers. --- [Figure 9]
[Figure 11] 	M. left side cover and spool holder lock removal 1. Peel off the leatherette (38), remove the screws, spread the spool holder (39) by pressing up on the back and remove the M. left side cover (40) [120] or [220]. Screws: panhead type 1 M1.7x4.0-B (95813407) x 2 screws self-tapping panhead type 1 M1.7x3.5-Ni (95873355) x 1 screw self-tapping panhead type 1 M1.7x3.5-B (95873357) x 1 screw 2. Remove the spring (41), remove the two guide screw B (42) and remove the two guide collar B (43) and spool holder lock (44). --- [Figure 10]
	* Reassembly notes o After reassembling the spool holder lock (44) and sliding it upward, the spool holder (39) should not move upward when pushed from the back. Also, (44) shall return properly. --- [Figure 11] o After reassemling the M. left side cover (40) [120] or [220], the spool holder (39) shall be moved only by the force of the flat spring without slipping.

Sketch	Explanation
	Note: The only difference between the M. left side cover (40) [120] and [220] is the film indicator plate adhered with the Plio-Bond.

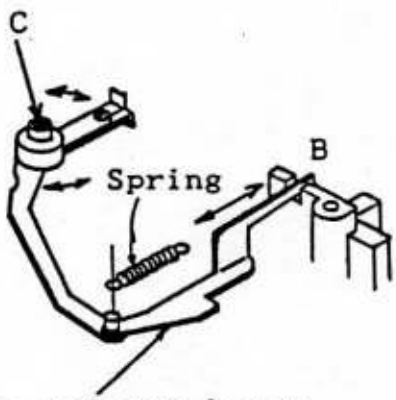


Sketch	Explanation

[Figure 12]



[Figure 13]



Winding will not stop.

Will not release after winding stops (overlapping frames).

Normal: The dividing claw drops into the slit in the dividing plate and stops when the counter roller A is rotated clockwise while pushing A.
The dividing claw drops into the next slit and stops each time B is pushed.
--- [Figure 12]

Does the dividing plate operate properly? NO → Disengaged spring, dirt, foreign matter.

↓ Yes

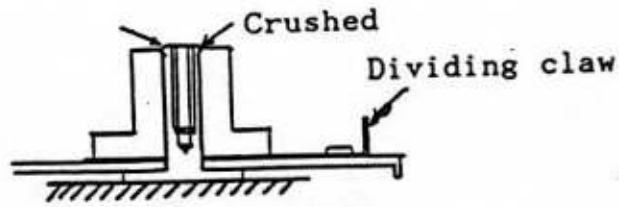
Is the dividing claw bent? NO → Replace the dividing plate and F. release lever.

↓ Yes

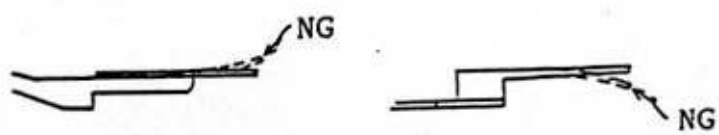
Does the F. release lever operate properly? NO → Repair or replace.

o When the spring is removed, the F. release lever shall return smoothly each time that B is pushed while pushing A in [Figure 12].
--- [Figure 13]

o Movement becomes bad when the axle in C is crushed.



Also make sure that the end of part B of the F. release lever is not bent.

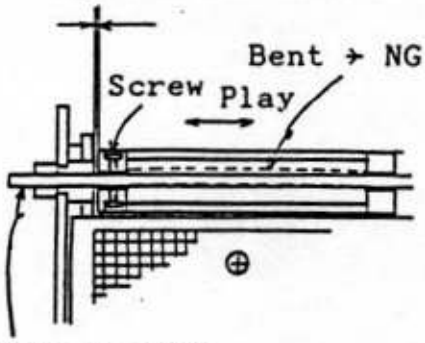


(FILM BACK-Ei)

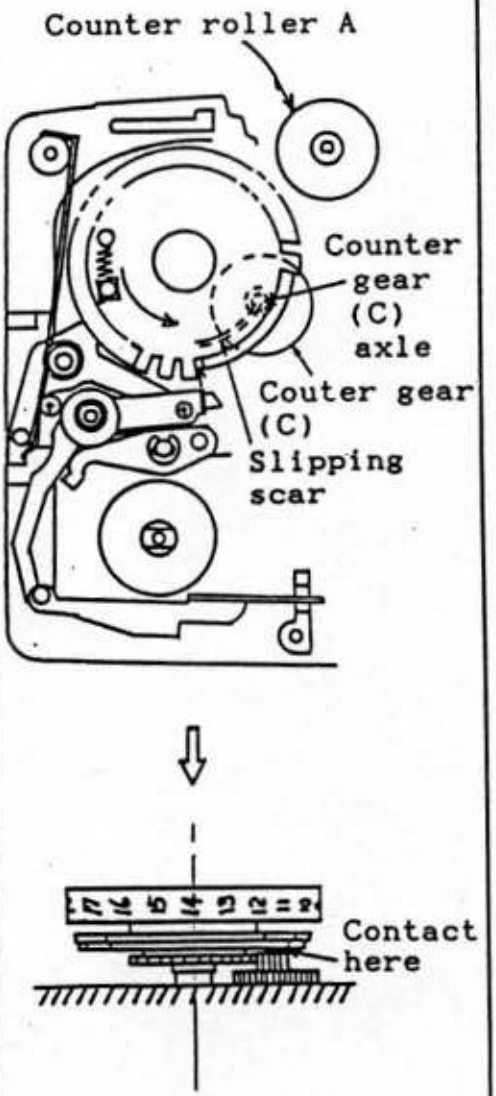
Sketch	Explanation

[Figure 14]

Adjust the gap to about 0.1mm and tighten the screw.



[Figure 15]



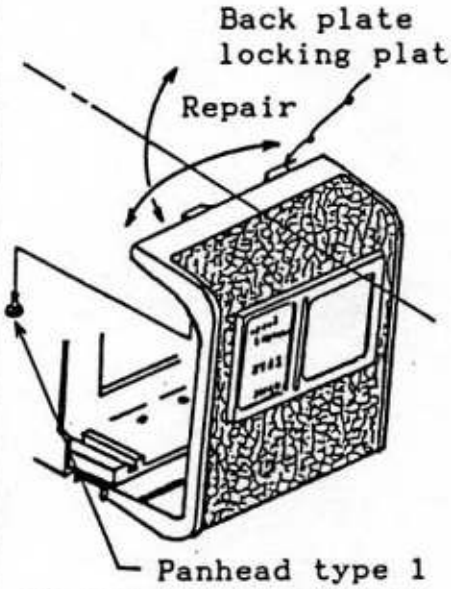
The film will not advance to the 15th frame

- Is the start position accurate? — NO → Check and readjust.
- Yes ↓
- Does the axle counter roller rotate smoothly? — NO → The roller axle bent and no play in the counter roller. [Figure 14]
- Yes ↓
- Is there foreign matter caught in the gear? — NO → Clean the gear.
- Yes ↓
- Is the counter gear (C) axle contacting the back side of the dividing plate? → File off part of the (C) axle. [Figure 15]

(FILM BACK-Ei)

Sketch	Explanation

[Figure 16]



The rear cover will not close.

Check if the rear cover touch against the inner frame. — NO → Twist the rear cover to correct it.

↓ Yes

Check if the rear cover locking plate touch against the connecting plate. — NO → Spread the rear cover to correct it. Locking plate screws loosened.

[Figure 16]

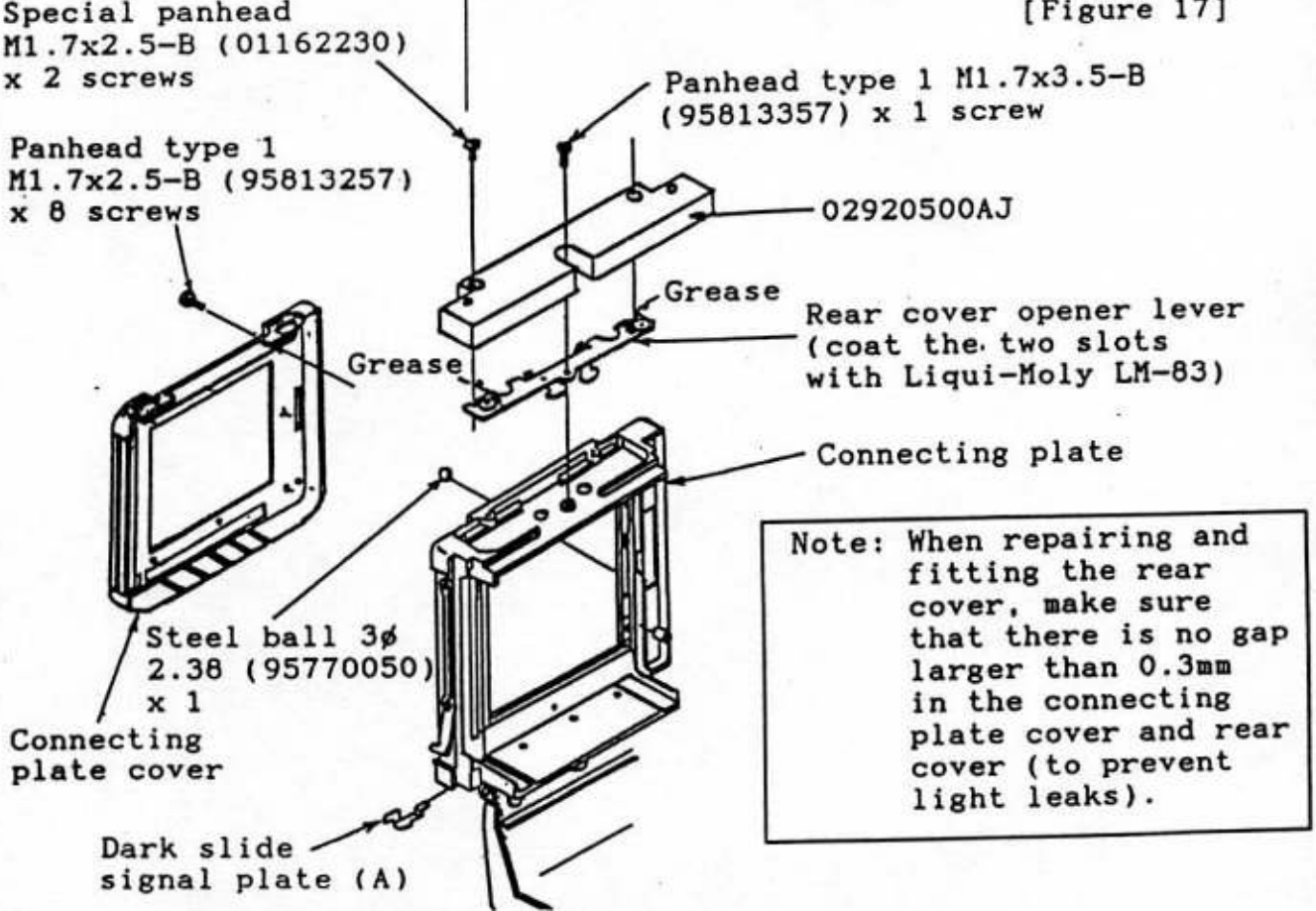
The rear cover will not open.

Check if the rear cover opener lever works smoothly. — NO → The rear cover is spread excessively. Locking plate screw loosened.

Out of grease. (Liqui-Moly LM-83)
Replace the rear cover opener lever.
(Use the locating jig - 02920500AJ)

[Figure 17]

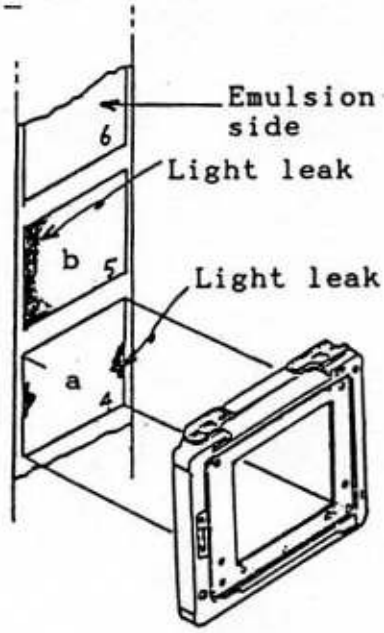
[Figure 17]



Note: When repairing and fitting the rear cover, make sure that there is no gap larger than 0.3mm in the connecting plate cover and rear cover (to prevent light leaks).

Sketch	Explanation

[Figure 18]



Light leaks

o Check where the light is entering.

o Align the emulsion side of the film with the surface of the connecting plate cover.

--- [Figure 18]

Case a

Is the sponge missing? — NO → Replace

↓ Yes

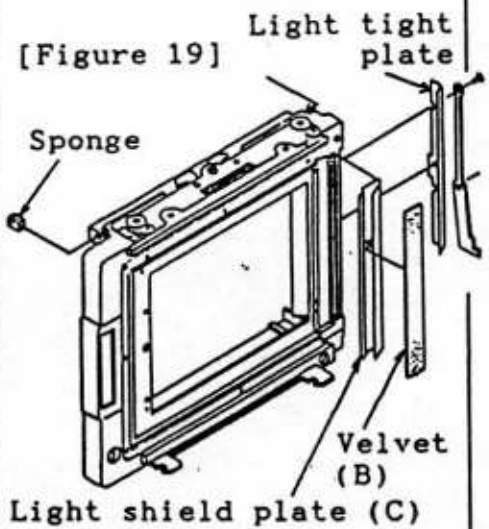
Is there a gap in the rear cover? — NO → Refer to page 9.

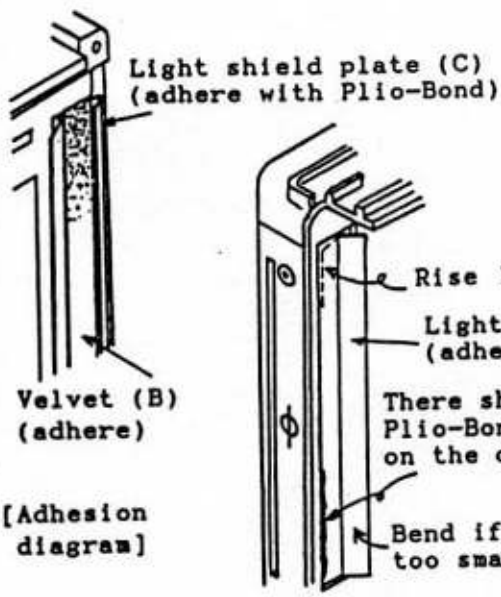
Case b

Are all of the light tight plate correctly adhered? → Replace or re-adhere.

[Figure 19]
[Figure 20]

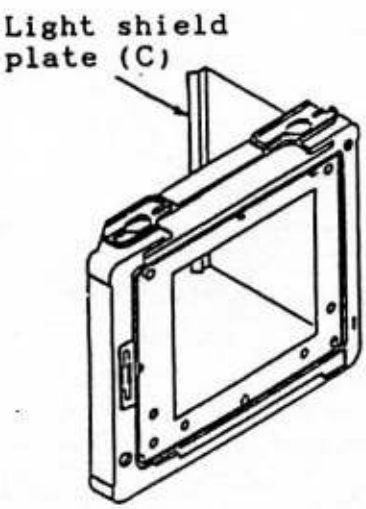
[Figure 19]




Light shield plate (C) (adhere with Plio-Bond)
Velvet (B) (adhere)
Rise NG!
Light shield plate (B) (adhere with Plio-Bond)
There shall be no excess Plio-Bond which can catch on the dark slide.
Bend if the angle is too small.

[Adhesion diagram]

[Figure 20]



Notes:

o When adhering the light tight plate, press and stroke with a bamboo spatula. Adhere firmly without running of excess Plio-Bond. -- Dry for 24 hours

o Adhere the light tight plate with Plio-Bond, cover it with the dark slide stopper and fasten with screws.

Screws: flat head type 3 M1.4x2.0-B (95841207) x 2 screws

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FARMINGDALE
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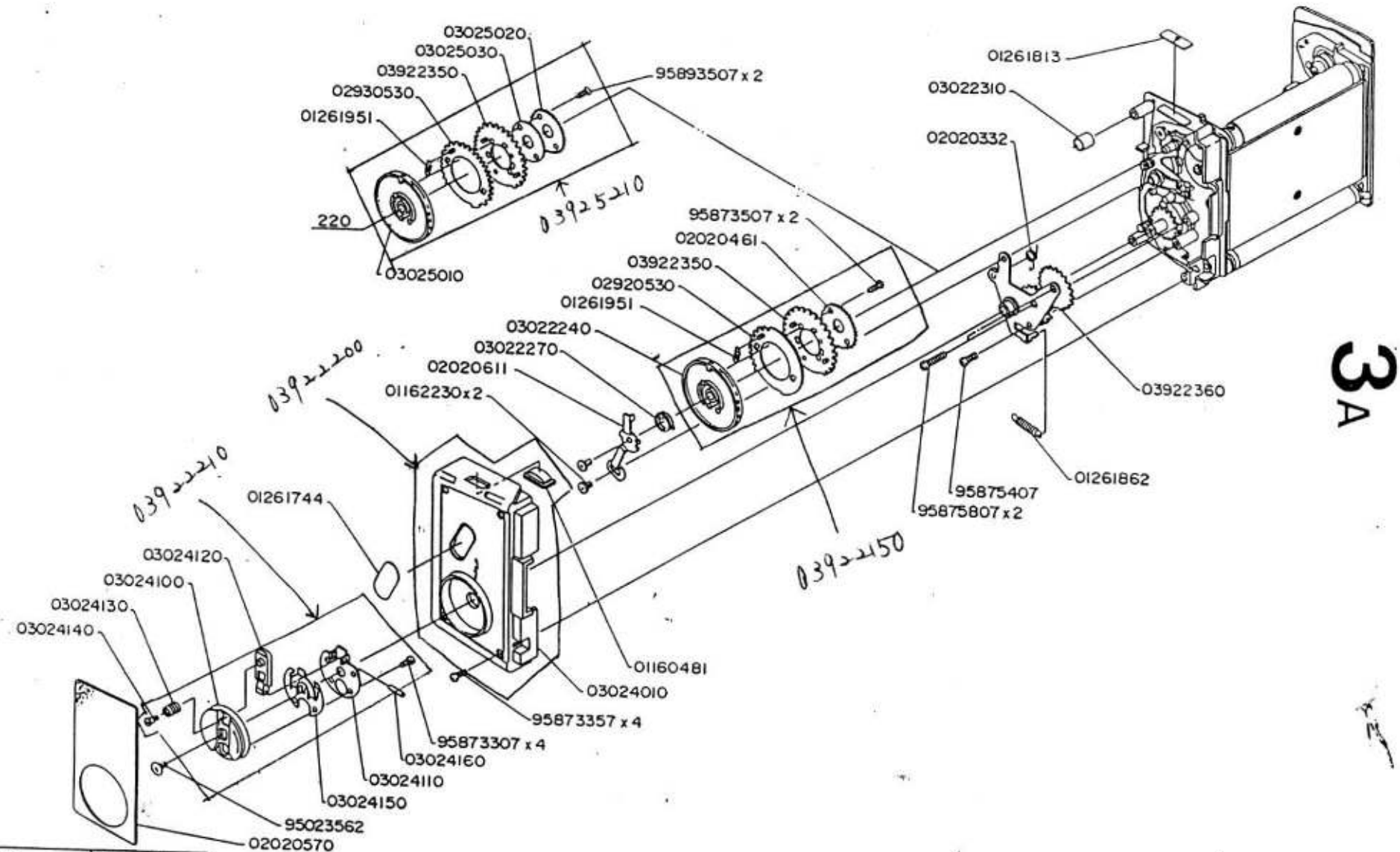
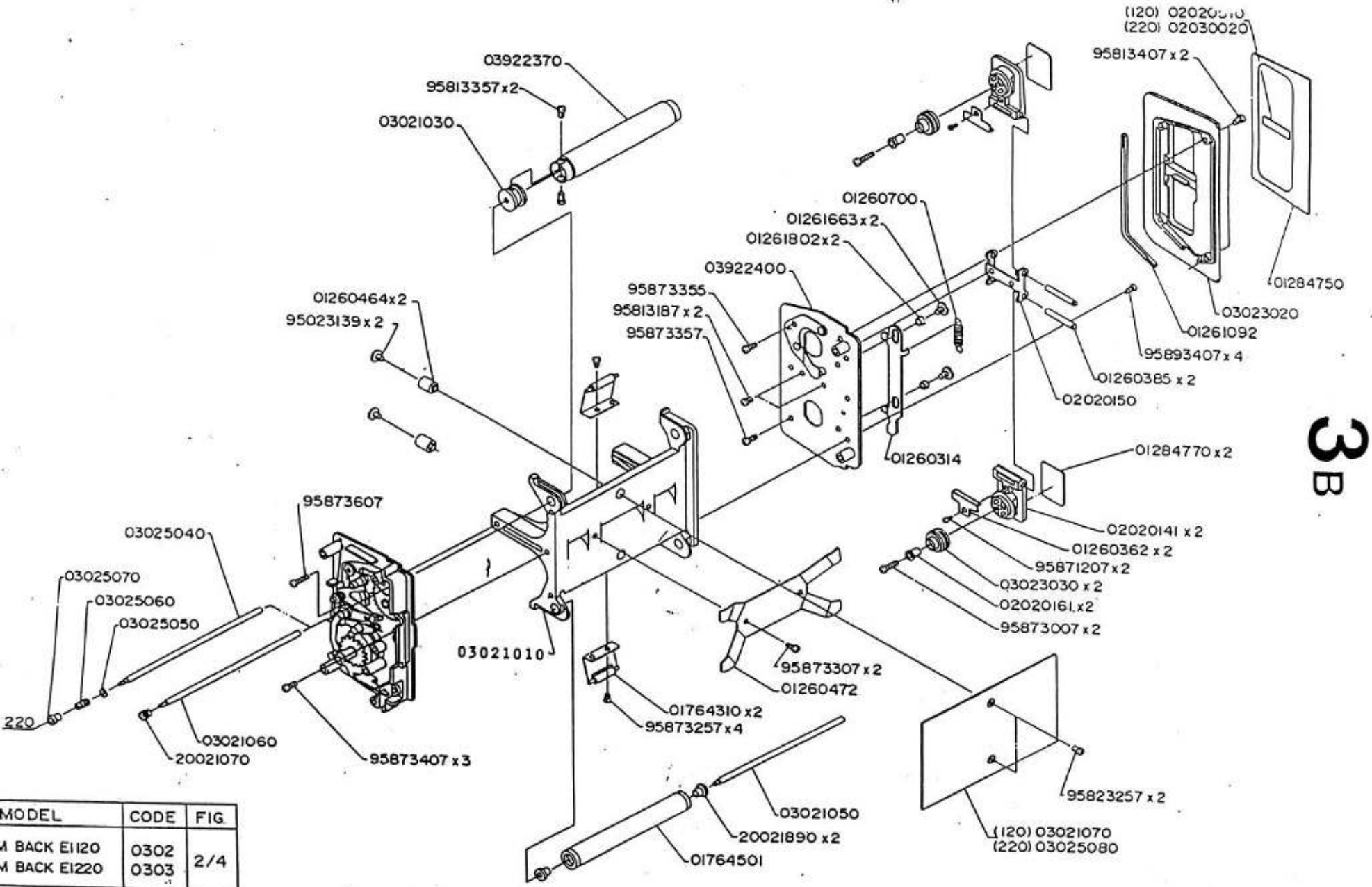


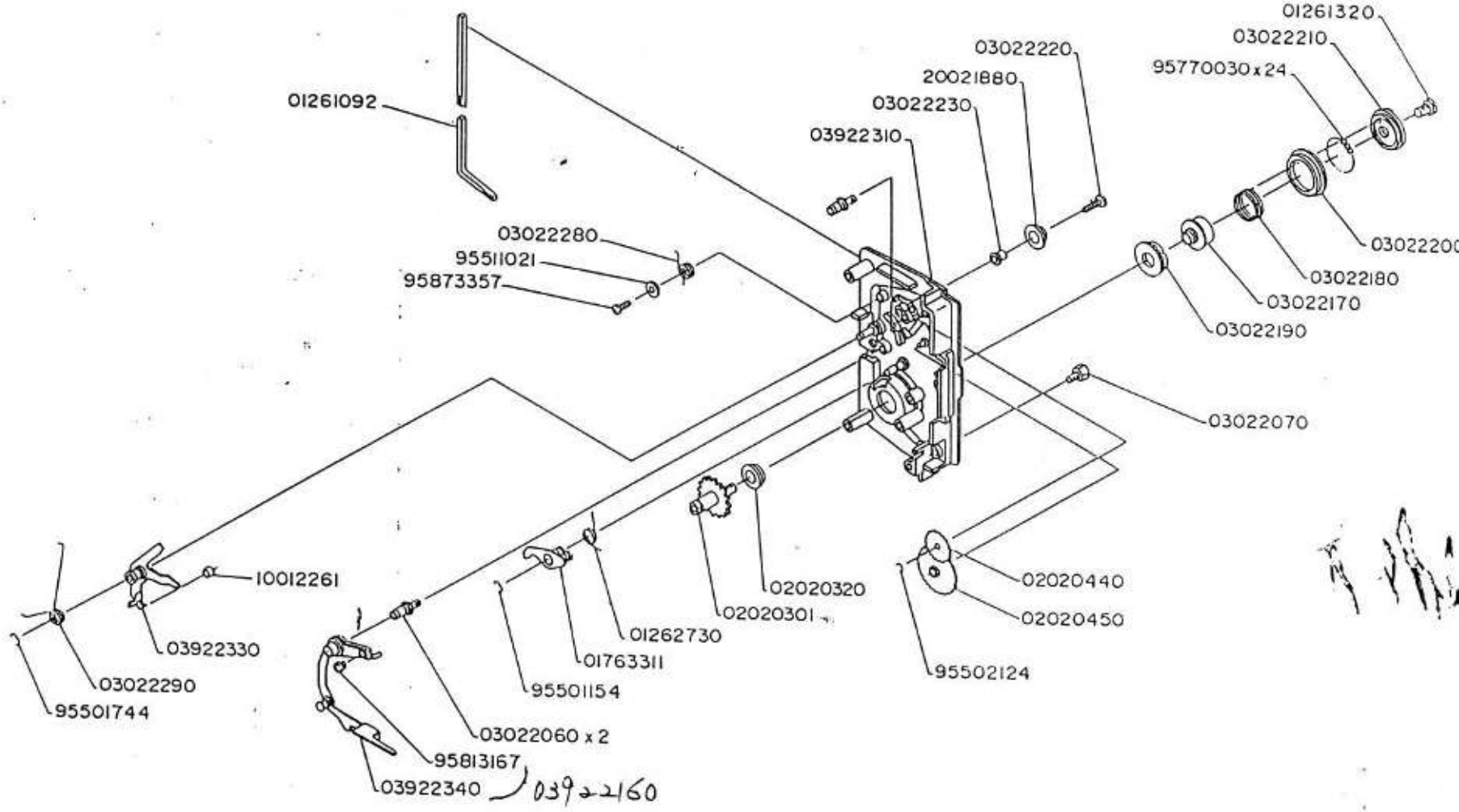
3A

MODEL	CODE	FIG.
M BACK E1120	0302	1/4
M BACK E1220	0303	

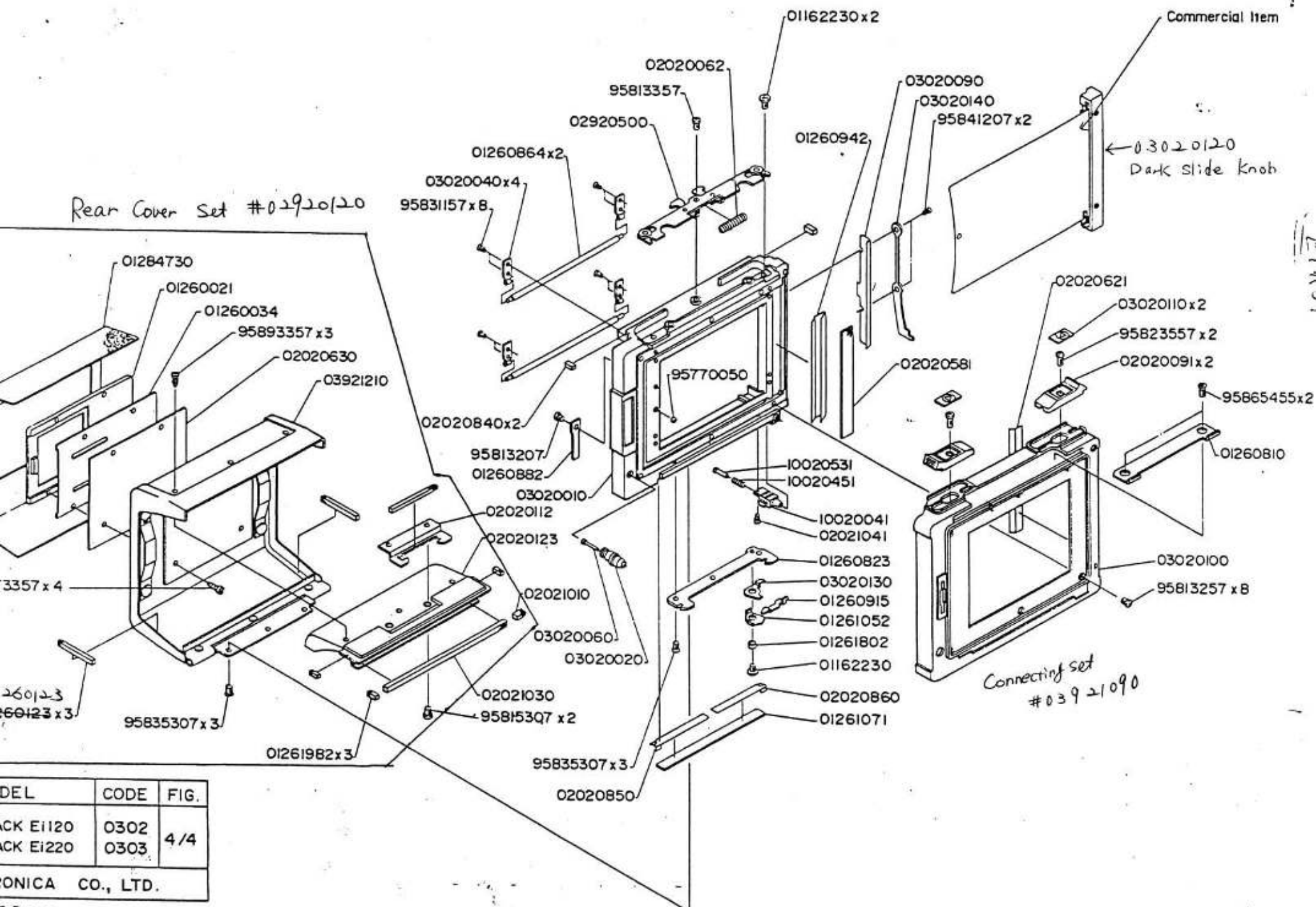


3B

MODEL	CODE	FIG.
M BACK E1120 M BACK E1220	0302 0303	2/4
BRONICA CO., LTD.		



MODEL	CODE	FIG.
FILM BACK E1120 FILM BACK E1220	0302 0303	3/4



DEL	CODE	FIG.
ACK Ei120 ACK Ei220	0302 0303	4/4
RONICA CO., LTD.		

S Furuya